

marked to show the amendments thereto are submitted in the Appendix at the end hereof.

Rejection Under 35 U.S.C. 112:

Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The rejection is traversed in part and responded to in part as set forth below.

As to claim 1 wherein “or” is recited at line 10, the rejection is traversed: The disjunctive conjunction “or” is not limited to two non-equivalent alternatives and the original wording of claim 1 as set forth is both technically and grammatically correct. Applicant’s wording means that the second adhesive layer is cross-linkable by electromagnetic radiation (e.g., by electromagnetic radiation without heat), by heat (e.g., by heat without electromagnetic radiation), or by both heat and electromagnetic radiation. Nevertheless, to advance prosecution, Applicant is amending claim 1 to insert the word “by” which is only a grammatical change for improved clarity, and is not a substantive change. This amendment does not narrow the scope of any claim element or limitation and so is not limiting of any claim element or limitation, and Applicant reserves the right to the benefit of the doctrine of equivalents with respect thereto.

Also regarding claim 1, the term “different release profile” is utilized to describe the different release characteristic of the adhesive layer with respect to the article being carried and the carrier base, i.e. typically that the adhesive layer release the article while remaining adhered to the carrier base. This is set forth in the specification at various places, for example, at page 3, lines 23-26, at page 7, lines 17-20, at page 12, line 6 to page 13, line 5, and at page 20, lines 1-9. To avoid any confusion, the specification is amended at pages 7, 12 and 20 to recite the same phrase “different release profile” as recited in claim 1.

As to claims 2, 11 and 21 which are asserted to be in improper Markush-type form: The rejection is traversed because these claims are not in Markush form. By way of grammatical clarification, claims 2, 11 and 21 are amended to recite that “the carrier base includes a waffle pack, a tray, a JEDEC tray, a tape-and-reel, or a tape” which overcomes the Examiner’s objection. This amendment does not narrow the scope of any claim element or limitation and so is not limiting of any claim element or limitation, and Applicant reserves the right to the benefit of the doctrine of equivalents with respect thereto. It is noted that a

“tape-and-reel” is a conventional arrangement for packaging electronic devices and parts for automated handling in use for many years, as is known to those of ordinary skill in the art. For example, a search of the USPTO patent database searching for “(spec/“tape and reel” or spec/“tape and reel”) and spec/packaging” produced 221 “hits.” Sampling three of the hits based upon the patent title found US 6,247,227 to Zibernia, US 6,206,198 to Troxtell et al and US 5,938,038 to Zibernia that refer to “tape and reel” packaging (copies enclosed for the Examiner’s convenience).

As to claims 4, 10, 13, 20 and 23: The rejection to the term “or” is traversed as above. The meaning of the term “or” is clear under the law and is consistently interpreted to mean that items recited in sequence are alternatives to each other. Schumer v. Laboratory Computer Systems Inc., 64 U.S.P.Q.2d 1832, 1838 (Fed. Cir. 2002). Nevertheless, to advance prosecution, Applicant is amending claims 4, 10, 13, 20 and 23 to insert the word “by” which is only a grammatical change, and is not a substantive change, in similar manner to that set forth above with regard to claim 1. This amendment does not narrow the scope of any claim element or limitation and so is not limiting of any claim element or limitation, and Applicant reserves the right to the benefit of the doctrine of equivalents with respect thereto.

As to claim 30 wherein “the one or more” is recited at line 11, the rejection is traversed. The phrase “one or more objects” should not be “at least one” as Examiner asserts.. The phrase “one or more” in line 11 is consistent with the same phrase as recited in line 1 of claim 30 and with the clarified wording “an adhesive layer disposed on said base layer for adhesively holding the one or more objects” of line 8 thereof. This amendment does not narrow the scope of any claim element or limitation and so is not limiting of any claim element or limitation, and Applicant reserves the right to the benefit of the doctrine of equivalents with respect thereto.

As to claim 33, the rejection is traversed. Antecedent basis for “said first adhesive layer” and “said second adhesive layer” is found in line 2 thereof which recites “wherein said adhesive layer comprises first and second adhesive layers exhibiting different adhesiveness.”

Accordingly, the rejection under 35 U.S.C. 112, second paragraph, is overcome and should be withdrawn.

Rejections Under 35 U.S.C. 103(a):

Claims 1-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Marutsuka ('481) in view of Plamthottam et al ('191). The rejection is overcome by claim 1 as amended.

Marutsuka ('481) relates to a transparent electromagnetic radiation shield material for a display 6. Therein, the shield includes transparent base material 1 which has a black resin (metallic oxide) layer 3, a metallic foil layer 4 and a second black resin (metallic oxide) layer providing a light shield, and an optional adhesive layer 2. (E.g., column 12, lines 41-61). The first black resin layer 3 is adhered to base material 1 with or without adhesive layer 2. (ID at lines 54-61) and there is no description or suggestion that the adhesion ever be released, i.e. it is a permanent adhesion. Marutsuka provides no suggestion or motivation for the release of resin layer 3 from base material 1.

As Examiner concedes, Marutsuka is silent regarding the adhesive layer being a cross-linking adhesive and peel strength, perhaps because Marutsuka intends for the bond to be permanent and not releasable as claimed. Moreover, the radiation shield of Marutsuka does not describe or suggest a reusable carrier structure, or a carrier base, for carrying an article.

Plamthottam et al ('191) relates to a tackified dual cure pressure sensitive adhesive. The adhesive has both a high shear adhesion failure temperature and good peel adhesion to a wide variety of substrates. (Column 2, lines 33-39; column 5, lines 58-59). Thus, Plamthottam '191 appears to be directed to an adhesive providing good adhesion after both a first and a second cure, and not an adhesive that releases when exposed to electromagnetic radiation and/or heat. Plamthottam '191 also appears to be directed to an adhesive providing good adhesion at high temperature that does not release when exposed to electromagnetic radiation and/or heat.

Examiner purports to combine Marutsuka and Plamthottam '191 by substituting the adhesive of Plamthottam '191 into the structure of Marutsuka, notwithstanding that neither reference suggests or provides any motivation for their being combined. The combination is improper under the law because neither reference suggests its combination with the other. Absent some statement or suggestion within the references themselves that they should be combined, there is no nexus which could substantiate the suggested combination.

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so."

ACS Hospital Systems, Inc. vs. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

The burden is on the Examiner to particularly identify the suggestion, teaching, or motivation in the reference(s) for their combination, and not just naming similarities between the reference(s) and the claimed invention. *Ruiz v. A.B. Chance Co.*, 234 F.3d 654 (Fed. Cir. 2000), 57 U.S.P.Q.2d 1161, 1166; *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999), 50 U.S.P.Q.2d 1614, 1618.

"[A] rejection cannot be predicated on the mere identification ... of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed."

Ecolochem Inc. v. Southern California Edison, 56 U.S.P.Q.2d 1065, 1076 (Fed. Cir. 2000) quoting *In re Rouffet*, 149 Fed.3d 1350, 1357 (Fed. Cir. 1998), 47 U.S.P.Q.2d 1453, 1456.

Moreover, even if Marutsuka and Plamthottam '191 could be combined, the result is not Applicant's claimed invention, because both references describe curing for permanently adhering, and not for releasing.

Neither reference, whether taken individually or in proper combination, describes or suggests the:

"a tacky adhesive layer disposed on said carrier base,
"said adhesive layer being cross-linkable by electromagnetic radiation, by heat, or by both heat and electromagnetic radiation, for decreasing the adhesion thereof, and
"said adhesive layer after being cross-linked having a different release profile from the surface of the article than from the surface of said carrier base, wherein the article may be removed leaving said adhesive layer adhering to said carrier base"

recited in Applicant's claim 1, which is therefore patentable.

Applicant's claims 2-8 are patentable at least because they depend from patentable claim 1. In addition, claim 2 recites "a waffle pack, a tray, a JEDEC tray, a tape-and-reel, or a tape," claims 5 and 6 recite loss of peel strength, and claims 8 and 9 recite temperature

stability for the carrier base, none of which are described or suggested by Marutsuka and/or Plamthottam '191, whether taken individually or in a legally proper combination.

Claims 1-27 and 29-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hallman et al ('377) in view of Plamthottam et al ('181). Applicant responds on the basis that the Examiner's reference to Plamthottam et al ('181) is intended as a reference to Plamthottam et al ('191). The rejection is overcome by amended claims 1, 10, 20 and 30.

Plamthottam et al ('191), discussed above, relates to a cured pressure sensitive adhesive material, not to a releasing material.

Hallman et al ('377) relates to a method for making a pattern on a support member and not to a reusable carrier structure as claimed in the present Application. Hallman deposits a metal (silver) layer 14 on a substrate 12 and deposits an inorganic overlayer of arsenic-sulfur 16 on the metal layer 14 (column 2, line 49 to column 3, line 75), neither of which layers is a cross-linkable adhesive. Exposure to actinic radiation causes a reaction between the metal and the overlayer material, not cross-linking. It is submitted that reacting metals and inorganic materials is very different from cross-linking of organic polymer adhesives, and does not describe or suggest cross-linkable adhesives.

Examiner's application of Hallman et al is in error. Item 12 of Hallman et al is a substrate (column 2, line 52) and not a carrier frame structure as asserted, item 14 is a metal layer (column 2, line 53) and not a second adhesive layer as asserted, item 16 is an inorganic overlayer (column 2, line 54) and not a first adhesive layer as asserted, and item 24 is a mask (column 4, lines 69-73) that appears to have holes therethrough and not a carrier base as asserted.

In addition, mask 24 of Hallman et al cannot be Applicant's carrier base because it does not contact layer 16, as is clear from Figures 2, 9 and 18 of Hallman et al. Applicant claims an adhesive layer on the carrier base, not spaced away from the carrier base or base layer.

Moreover, the combination of Hallman et al and Plamthottam '191 is improper for the same reasons set forth above regarding the combination of Marutska and Plamthottam '191, and so claims 1-27 and 29-33 are patentable.

Even if Hallman et al and Plamthottam '191 could be combined, the result of adding the non-releasing adhesive of Plamthottam '191 to Hallman et al would produce a non-releasing structure, e.g., would render the structure of Hallman et al inoperative. In addition, this result also indicates the impropriety of the purported combination of references.

On the other hand, Applicants' claim 1 is patentable because it recites:

“a carrier base having at least a portion thereof transparent to electromagnetic radiation,

“a surface of said carrier base having different surface properties from a surface of the article, and

“said carrier base being stable to resist deformation by heat at temperatures less than or equal to about 80°C; and

“a tacky adhesive layer disposed on said carrier base,

“said adhesive layer being cross-linkable by electromagnetic radiation, by heat, or by both heat and electromagnetic radiation, for decreasing the adhesion thereof, and

“said adhesive layer after being cross-linked having a different release profile from the surface of the article than from the surface of said carrier base, wherein the article may be removed leaving said adhesive layer adhering to said carrier base,”

which is neither described or suggested by Hallman et al and/or Plamthottam '191, whether taken individually or properly combined.

Further, Applicants' claim 10 is patentable because it recites:

“an adhesive laminate disposed on a surface of said carrier base, said adhesive laminate comprising:

“an adhesive base;

“a first adhesive layer disposed on a first surface of said adhesive base for removably connecting said carrier base and said adhesive base; and

“a second adhesive layer disposed on a second surface of said adhesive base for providing a tacky carrier surface,

“said second adhesive layer being cross-linkable by electromagnetic radiation, by heat, or by both heat and electromagnetic radiation, for decreasing the tackiness thereof,

“wherein an article carried on the carrier surface is released when said second adhesive layer is cross-linked by electromagnetic radiation applied through the transparent portion of the carrier base, by heat, or by both heat and electromagnetic radiation,”

which is neither described or suggested by Hallman et al and/or Plamthottam '191, whether taken individually or properly combined.

In addition, Applicants' claim 20 is patentable because it recites:

“a first adhesive layer removably disposed on a surface of said carrier base;
and
“a second adhesive layer disposed on said first adhesive layer for providing a tacky carrier surface, and
“said second adhesive layer being cross-linkable by electromagnetic radiation, by heat, or by both heat and electromagnetic radiation, for decreasing the tackiness thereof,
“wherein an article carried on the carrier surface is released when said second adhesive layer is cross-linked by electromagnetic radiation applied through the transparent portion of the carrier base, by heat, or by both heat and electromagnetic radiation,”

which is neither described or suggested by Hallman et al and/or Plamthottam '191, whether taken individually or properly combined.

Applicants' claim 30 is patentable because it recites:

“an adhesive layer disposed on said base layer for adhesively holding one or more objects,
“wherein said adhesive layer becomes cross-linked upon exposure to electromagnetic radiation applied through the transparent portion of the base layer thereby to exhibit a reduction of adhesiveness,
“wherein the reduction of adhesiveness to the one or more objects exceeds the reduction of adhesiveness to said base layer,
“whereby one or more objects carried on said adhesive layer are released when said adhesive layer is cross-linked by exposure to electromagnetic radiation applied through the transparent portion of the base layer,”

which is neither described or suggested by Hallman et al and/or Plamthottam '191, whether taken individually or properly combined.

Applicant's claims 2-9, 11-19, 21-27, 29 and 31-33 are patentable at least because they depend from one of patentable claims 1, 10, 20 and 30. In addition, claims 2, 11 and 21 recite “a waffle pack, a tray, a JEDEC tray, a tape-and-reel, or a tape,” claims 5, 6, 14, 15, 24 and 25 recite loss of peel strength, and claims 7, 8, 16, 17, 18, 26 and 27 recite temperature stability for the carrier base, claims 9, 19, 29 and 30 recite a carrier frame or carrier structure supporting the carrier base, and claim 32 recites temperature stability for the carrier structure, none of which are described or suggested by Hallman et al and/or Plamthottam '191, whether taken individually or in legally proper combination.

Claims 28 and 34 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hallman et al ('377) in view of Plamthottam et al ('191) and further in view of Kelly et al ('809). The rejection is traversed.

Hallman et al and Plamthottam ('191) are discussed above and the combination thereof is improper under the law for the reasons set forth above. Because the combination of Hallman et al and Plamthottam ('191) is improper, the combination with Kelly et al is likewise improper and the rejection should be withdrawn.

In addition, Applicant's claims 28 and 34 are patentable at least because they depend from one of patentable claims 20 and 30.

Accordingly, the rejections under 35 U.S.C. §103(a) are overcome and should be withdrawn.

Newly Added Claims 35-36:

Support for newly added claims 35-36 is found, for example, in Figures 5-6 and in the specification at page 17, line 18 to page 20, line 29.

Newly added claims 35-36 are patentable at least for the reasons set forth herein with respect to claims 1-34, and further because none of the references, whether taken individually or if properly combined, describe or suggest the re-usable carrier for releasably carrying one or more objects comprising:

“a carrier structure having a support member and adapted for receiving a cover;

“a carrier base disposed on the support member of said carrier structure, wherein at least a portion of said carrier base is transparent to ultraviolet radiation, and wherein said carrier base is formed of a material that is stable at temperatures less than about 80°C; and

“a cross-linkable tacky adhesive layer disposed on said carrier base for adhesively holding one or more objects, wherein said adhesive layer becomes cross-linked upon exposure to ultraviolet radiation applied through the transparent portion of said carrier base layer thereby to exhibit a reduction of adhesiveness, wherein the reduction of adhesiveness to the one or more objects is more than about 70% and exceeds the reduction of adhesiveness to said carrier base, and

“a cover disposed on said carrier structure, wherein said cover is of a material opaque to ultraviolet radiation for blocking ultraviolet radiation from cross-linking

said cross-linkable tacky adhesive layer,

“whereby one or more objects carried on said adhesive layer are released when said cover is removed and said adhesive layer is cross-linked by exposure to ultraviolet radiation applied through the transparent portion of the carrier base.”

recited in added claim 35 or that the:

“carrier structure includes a rectangular frame having a ledge providing the support member,”

or that the:

“cover includes first and second covers disposed on opposite ends of said rectangular frame, wherein said first and second covers and said rectangular frame enclose said carrier base,”

as recited in added claim 36.

Accordingly, claims 35-36 are patentable and their allowance is solicited.


Conclusion:

Enclosed is a check in the amount of \$115.00 in payment of the \$55.00 fee for a one-month extension of the time to respond and of the \$60.00 fee for increasing the number of independent claims by one and the total number of claims by two in this response. Should any other or additional fee be due in consequence of this response, please charge such fee and deposit any refund to Deposit Account 04-1406 of Dann, Dorfman, Herrell & Skillman.

Applicant respectfully requests that the objections and rejections be withdrawn, and that the Application including claims 1-36 be allowed and passed to issuance.

The Examiner is requested to telephone the undersigned attorney if there is any question or if prosecution of this Application could be furthered by telephone.

Respectfully submitted,
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